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## Selective functionalisation of saturated C-H bonds with metalloporphyrin catalysts

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529	Combined C-H functionalization/Cope rearrangement with vinyl ethers as a surrogate for the vinylogous Mukaiyama aldol reaction. <b>2011</b> , 133, 11940-3		53
528	Synthesis and structure of mono- and di-nuclear complexes of ortho-palladated derived from phosphorus ylides. <b>2011</b> , 696, 3521-3526		13
527	Selective functionalisation of saturated C-H bonds with metalloporphyrin catalysts. <i>Chemical Society Reviews</i> , <b>2011</b> , 40, 1950-75	58.5	489
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513	Co(porphyrin)-catalysed amination of 1,2-dihydronaphthalene derivatives by aryl azides. <b>2012</b> , 716, 269-274		12

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511	Ligand-Accelerated Activation of Strong C-H Bonds of Alkanes by a (Salen)ruthenium(VI) Nitrido Complex. <b>2012</b> , 124, 9235-9238	15
510	Organocatalytic Asymmetric Direct C-H Functionalization of Ethers: A Highly Efficient Approach to Chiral Spiroethers. <b>2012</b> , 124, 8941-8945	27
509	Towards alternatives to anodic water oxidation: basket-handle thiolate Fe(III) porphyrins for electrocatalytic hydrocarbon oxidation. <b>2012</b> , 5, 2361-75	3
508	Iron(III) tetrakis(pentafluorophenyl)porpholactone catalyzes nitrogen atom transfer to C=C and C-H bonds with organic azides. <b>2012</b> , 41, 1457-60	49
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- 417 Metal-Metal Bond-Containing Complexes as Catalysts for C-H Functionalization. **2014**, 225-302 32
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393	Use of chemical auxiliaries to control p450 enzymes for predictable oxidations at unactivated C-H bonds of substrates. <b>2015</b> , 851, 209-28	7
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382	Targeted fluorination with the fluoride ion by manganese-catalyzed decarboxylation. <b>2015</b> , 54, 5241-5	102
381	Palladium-catalyzed glycosylation: novel synthetic approach to diverse N-heterocyclic glycosides. <b>2015</b> , 17, 1357-60	21
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377	Catalytic and Biocatalytic Iron Porphyrin Carbene Formation: Effects of Binding Mode, Carbene Substituent, Porphyrin Substituent, and Protein Axial Ligand. <b>2015</b> , 137, 7560-3	58
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374	Manganese-catalyzed late-stage aliphatic C-H azidation. <b>2015</b> , 137, 5300-3	223
373	Synthesis of SF <sub>5</sub> -Substituted Tetrapyrroles, Metalloporphyrins, BODIPYs, and Their Dipyrrane Precursors. <b>2015</b> , 80, 5133-43	30
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- 197 Recent advances in intramolecular C-D/C-N/C-S bond formation via C-H functionalization. **2019**, 6, 3445-3489 55
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- 193 Copper-Catalyzed C(sp<sup>3</sup>)-H Amidation: Sterically Driven Primary and Secondary C-H Site-Selectivity. **2019**, 131, 3459-3463 9
- 192 An Effective [Fe(TFDMAP)Cl] Catalyst for C-H Bond Amination with Aryl and Alkyl Azides. **2019**, 21, 895-899 36
- 191 Photochemical C-H Amination of Ethers and Geminal Difunctionalization Reactions in One Pot. **2019**, 58, 12440-12445 14
- 190 Electrochemical C-H oxygenation and alcohol dehydrogenation involving Fe-oxo species using water as the oxygen source. **2019**, 10, 7542-7548 28
- 189 Enantiodivergent  $\beta$ -Amino C-H Fluoroalkylation Catalyzed by Engineered Cytochrome P450s. **2019**, 141, 9798-9802 60

188	Lactam Hydrogen Bonds as Control Elements in Enantioselective Transition-Metal-Catalyzed and Photochemical Reactions. <b>2019</b> , 84, 8815-8836	42
187	Catalytic Recycling of a Th $\pi$ Bond via Single or Double Hydroboration of Inactivated Imines or Nitriles. <b>2019</b> , 9, 5947-5956	33
186	Ruthenium(II) Porphyrin Quinoid Carbene Complexes: Synthesis, Crystal Structure, and Reactivity toward Carbene Transfer and Hydrogen Atom Transfer Reactions. <b>2019</b> , 141, 9027-9046	31
185	Synthesis, self-assembly and applications of functional polymers based on porphyrins. <b>2019</b> , 95, 65-117	86
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183	Manganese(III) Porphyrin-Catalyzed Dehydrogenation of Alcohols to Form Imines, Tertiary Amines and Quinolines. <b>2019</b> , 25, 6439-6446	26
182	Electrochemical, Spectroelectrochemical, and Structural Studies of Mono- and Diphosphorylated Zinc Porphyrins and Their Self-Assemblies. <b>2019</b> , 58, 4665-4678	6
181	Carbonylation of tertiary carbon radicals: synthesis of lactams. <b>2019</b> , 55, 4655-4658	21
180	Enantioselective Arylation of Benzylic C $\pi$ Bonds by Copper-Catalyzed Radical Relay. <b>2019</b> , 131, 6491-6495	8
179	Enantioselective Arylation of Benzylic C-H Bonds by Copper-Catalyzed Radical Relay. <b>2019</b> , 58, 6425-6429	56
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177	Scope and Limitations of TBA[Fe]-Catalyzed Carbene Transfer to X $\pi$ -bonds Indication of a Mechanistic Dichotomy. <b>2019</b> , 11, 5260-5263	8
176	Ruthenium-Catalyzed Gram-Scale Preferential C-H Arylation of Tertiary Phosphine. <b>2019</b> , 21, 2885-2889	17
175	Iron-Catalyzed Intramolecular Amination of Aliphatic C-H Bonds of Sulfamate Esters with High Reactivity and Chemoselectivity. <b>2019</b> , 21, 2673-2678	22
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173	Iron-Catalyzed Synthesis of Dihydronaphthalenones from Aromatic Oxime Esters. <b>2019</b> , 361, 3223-3227	16
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169	Site-specific allylic C-H bond functionalization with a copper-bound N-centred radical. <b>2019</b> , 574, 516-521	105
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162	Electrocatalytic Tandem Synthesis of 1,3-Disubstituted Imidazo[1,5- a]quinolines via Sequential Dual Oxidative C(sp <sup>3</sup> )-H Amination in Aqueous Medium. <b>2019</b> , 84, 3148-3157	30
161	Competitive Intramolecular Amination as a Clock for Iron-Catalyzed Nitrene Transfer. <b>2019</b> , 58, 1107-1119	5
160	Manganese-Catalyzed Asymmetric Oxidation of Methylene C-H of Spirocyclic Oxindoles and Dihydroquinolinones with Hydrogen Peroxide. <b>2019</b> , 21, 618-622	28
159	Porphyrins on mica: Atomic force microscopy imaging in organic solvents. <b>2019</b> , 561, 194-200	2
158	Manganese porphyrins as efficient catalysts in solvent-free cyclohexane oxidation. <b>2020</b> , 13, 1563-1574	8
157	Site-Selective C(sp <sup>3</sup> )-H Functionalization of Fluorinated Alkanes Driven by Polar Effects Using a Tungstate Photocatalyst. <b>2020</b> , 2020, 1424-1428	9
156	Mechanism and stereoselectivity of benzylic C-H hydroxylation by Ru-porphyrin: a computational study. <b>2020</b> , 18, 346-352	2
155	DFT Mechanistic Account for the Site Selectivity of Electron-Rich C(sp <sup>3</sup> )-H Bond in the Manganese-Catalyzed Aminations. <b>2020</b> , 22, 453-457	15
154	Ruthenium porphyrin catalysed intermolecular amino-oxyarylation of alkenes to give primary amines via a ruthenium nitrido intermediate. <b>2019</b> , 56, 137-140	3
153	Spin modification of iron(II) complexes via covalent (dative) and dispersion guided non-covalent bonding with N-heterocyclic carbenes: DFT, DLPNO-CCSD(T) and MCSCF studies. <b>2020</b> , 49, 164-170	4

152	Iridium(III)-Catalyzed Intermolecular C(sp <sup>3</sup> ) $\beta$ Insertion Reaction of Quinoid Carbene: A Radical Mechanism. <b>2020</b> , 132, 1861-1866	4
151	Manganese Catalyzed Acceptorless Dehydrogenative Coupling Reactions. <b>2020</b> , 12, 1891-1902	37
150	Iridium(III)-Catalyzed Intermolecular C(sp <sup>3</sup> )-H Insertion Reaction of Quinoid Carbene: A Radical Mechanism. <b>2020</b> , 59, 1845-1850	21
149	Water-soluble Cu(II)-complexes of Schiff base amino acid derivatives as biological reagents and sufficient catalysts for oxidation reactions. <b>2020</b> , 113, 27-45	13
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147	Manganese-Catalyzed Multicomponent Synthesis of Tetrasubstituted Propargylamines: System Development and Theoretical Study. <b>2020</b> , 362, 3872-3885	7
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144	Enantioconvergent Amination of Racemic Tertiary C-H Bonds. <b>2020</b> , 142, 20902-20911	27
143	A Pincer Motif Etched into a meta-Benziporphyrin Frame. <b>2020</b> , 181	0
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140	Fe-Catalyzed Aziridination Is Governed by the Electron Affinity of the Active Imido-Iron Species. <b>2020</b> , 10, 10010-10020	22
139	Site-Selective C $\beta$ Benzylation of Alkanes with N-Triflylhydrazones Leading to Alkyl Aromatics. <b>2020</b> , 6, 2110-2124	12
138	DMSO-Enabled Selective Radical O-H Activation of 1,3(4)-Diols. <b>2020</b> , 59, 19851-19856	18
137	Intramolecular C(sp <sup>3</sup> )-H Bond Oxygenation by Transition-Metal Acylnitrenoids. <b>2020</b> , 59, 21706-21710	12
136	Asymmetric Ruthenium-Catalyzed Hydrogenation of Terpyridine-Type $\pi$ -Heteroarenes: Direct Access to Chiral Tridentate Nitrogen Ligands. <b>2020</b> , 22, 6452-6457	5
135	Bridging and axial carbene binding modes in cobalt corrole complexes: effect on carbene transfer. <b>2020</b> , 56, 14881-14884	3

134	Mechanistic Understanding of the Pd(0)-Catalyzed Coupling Cyclization of 1,2-Allenyl Ketones with Aryl Halides: A Computational Study. <b>2020</b> , 10, 13202-13212	5
133	Reaction chemistry of noble metal porphyrins in solutions as a foundation for practical applications. <b>2020</b> , 926, 121484	2
132	Synthesis of 2-bromo- and 2-phenyl-neo-confused porphyrins. <b>2020</b> , 18, 7336-7344	3
131	Synthesis and Characterization of $\beta$ -Methylporphyrins, Heteroporphyrins, Carbaporphyrins, and Related Systems. <b>2020</b> , 85, 13050-13068	5
130	Direct C-H bond halogenation and pseudohalogenation of hydrocarbons mediated by high-valent 3d metal-oxo species. <b>2020</b> , 49, 14344-14360	3
129	DMSO-Enabled Selective Radical O <sub>H</sub> Activation of 1,3(4)-Diols. <b>2020</b> , 132, 20023-20028	6
128	Dirhodium Coordination Polymers for Asymmetric Cyclopropanation of Diazoindoles with Olefins: Synthesis and Spectroscopic Analysis. <b>2020</b> , 85, 1737-1746	3
127	Ligand regulation for manganese-catalyzed enantioselective epoxidation of olefins without acid. <b>2020</b> , 56, 13101-13104	8
126	Manganese-Catalyzed Oxidative Azidation of C(sp)-H Bonds under Electrophotocatalytic Conditions. <b>2020</b> , 142, 17693-17702	85
125	Silver-Catalyzed Activation of Pyridotriazoles for Formal Intramolecular Carbene Insertion into Vinylic C(sp)-H Bonds. <b>2020</b> , 22, 7255-7260	7
124	A flexible bis-Co(III) porphyrin cage as a bimetallic catalyst for the conversion of CO <sub>2</sub> and epoxides into cyclic carbonates. <b>2020</b> , 12, 5826-5833	2
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121	Cu-catalysed intramolecular radical enantioconvergent tertiary $\beta$ C(sp <sup>3</sup> ) <sub>H</sub> amination of racemic ketones. <b>2020</b> , 3, 539-546	34
120	Transient-axial-chirality controlled asymmetric rhodium-carbene C(sp)-H functionalization for the synthesis of chiral fluorenes. <b>2020</b> , 11, 2363	21
119	Late-Stage Lead Diversification Coupled with Quantitative Nuclear Magnetic Resonance Spectroscopy to Identify New Structure-Activity Relationship Vectors at Nanomole-Scale Synthesis: Application to Loratadine, a Human Histamine H Receptor Inverse Agonist. <b>2020</b> , 63, 7268-7292	8
118	Iron catalysts with N-ligands for carbene transfer of diazo reagents. <i>Chemical Society Reviews</i> , <b>2020</b> , 49, 4867-4905	58.5 35
117	Iron- and cobalt-catalyzed C(sp)-H bond functionalization reactions and their application in organic synthesis. <i>Chemical Society Reviews</i> , <b>2020</b> , 49, 5310-5358	58.5 56



116	Catalytic C-H aerobic and oxidant-induced oxidation of alkylbenzenes (including toluene derivatives) over VO immobilized on core-shell FeO@SiO <sub>2</sub> at room temperature in water.. <b>2020</b> , 10, 23543-23553	9
115	Enantioselective Ring-Closing C-H Amination of Urea Derivatives. <b>2020</b> , 6, 2024-2034	26
114	Artificial nonheme iron and manganese oxygenases for enantioselective olefin epoxidation and alkane hydroxylation reactions. <b>2020</b> , 421, 213443	35
113	Oxidation of azo dye Orange II with hydrogen peroxide catalyzed by 5,10,15,20-tetrakis[4-(diethylmethylammonio)phenyl]porphyrinato-cobalt(II)tetraiodide in aqueous solution. <b>2020</b> , 24, 520-526	8
112	Heterogenization of porphyrin complexes within the nanocages of SBA-16: New efficient and stable catalysts for the epoxidation of olefins. <b>2020</b> , 603, 125229	2
111	Non-Heme-Type Ruthenium Catalyzed Chemo- and Site-Selective C-H Oxidation. <b>2020</b> , 15, 762-765	7
110	Theoretical Study of Iron Porphyrin Nitrene: Formation Mechanism, Electronic Nature, and Intermolecular C-H Amination. <b>2020</b> , 59, 1622-1632	13
109	Enantioselectivity of a tartaric acid amide linked zinc bisporphyrinate towards amino acid esters. <b>2020</b> , 176, 108223	4
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107	Enantioselective oxygenation of exocyclic methylene groups by a manganese porphyrin catalyst with a chiral recognition site. <b>2020</b> , 11, 2121-2129	29
106	Study on C-H amination reactions catalyzed by iron porphyrin nitrene complexes with different nitrogen sources. <b>2020</b> , 114, 107787	2
105	Control over the Redox Cooperative Mechanism of Radical Carbene Transfer Reactions for the Efficient Active-Metal-Template Synthesis of [2]Rotaxanes. <b>2020</b> , 26, 7808-7822	7
104	Sluggish reactivity by a nonheme iron(IV)-tosylimido complex as compared to its oxo analogue. <b>2020</b> , 49, 5921-5931	8
103	Benchmarking computational methods and influence of guest conformation on chirogenesis in zinc porphyrin complexes. <b>2020</b> , 22, 11025-11037	3
102	A Dinickel Catalyzed Cyclopropanation without the Formation of a Metal Carbene Intermediate. <b>2021</b> , 133, 1925-1930	1
101	A Dinickel Catalyzed Cyclopropanation without the Formation of a Metal Carbene Intermediate. <b>2021</b> , 60, 1897-1902	6
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99	Decarboxylative Halogenation of Organic Compounds. <b>2021</b> , 121, 412-484	39

98	Site-selective functionalization of remote aliphatic C-H bonds C-H metallation. <b>2020</b> , 12, 841-852	31
97	Substrate specificity in the biomimetic catalytic aerobic oxidation of styrene and cyclohexanone by metalloporphyrins: kinetics and mechanistic study. <b>2021</b> , 2, 217-223	1
96	Studies of C <sup>≡</sup> N Activation and Functionalization: Combined Computational and Experimental Efforts to Elucidate Mechanisms, Principles, and Catalysts. <b>2021</b> , 767-806	1
95	Design of molecular water oxidation catalysts with earth-abundant metal ions. <i>Chemical Society Reviews</i> , <b>2021</b> , 50, 6790-6831	58.5 24
94	Navigating the Unnatural Reaction Space: Directed Evolution of Heme Proteins for Selective Carbene and Nitrene Transfer. <b>2021</b> , 54, 1209-1225	49
93	Carbene functionalization of porphyrinoids through tosylhydrazones. <b>2021</b> , 19, 9199-9210	1
92	Recent Advances in Copper Promoted Inert C(sp <sup>3</sup> )C <sup>≡</sup> N Functionalization. <b>2021</b> , 11, 967-984	13
91	Iron hexamesityl-5,15-diazaporphyrin: synthesis, structure and catalytic use for direct oxidation of sp C-H bonds. <b>2021</b> , 50, 6343-6348	1
90	A computational approach to understand the role of metals and axial ligands in artificial heme enzyme catalyzed C-H insertion. <b>2021</b> , 23, 9500-9511	5
89	Regiospecific and Enantioselective Arylvinylcarbene Insertion of a C-H Bond of Aniline Derivatives Enabled by a Rh(I)-Diene Catalyst. <b>2021</b> , 143, 2608-2619	16
88	Recent Developments in Dehydrogenative Organic Transformations Catalyzed by Homogeneous Phosphine-Free Earth-Abundant Metal Complexes. <b>2021</b> , 10, 506-536	0
87	Supramolecular Chirogenesis in Bis-Porphyrin: Crystallographic Structure and CD Spectra for a Complex with a Chiral Guanidine Derivative. <b>2021</b> , 13, 275	1
86	Insight into structural aspects and study of reaction kinetics of model [oxo(salen)iron(IV)] complexes with dipeptides. <b>2021</b> , 196, 114952	
85	Recent Advancements of Porphyrin-Like Single-Atom Catalysts: Synthesis and Applications. <b>2021</b> , 2, 2100007	34
84	Metalloradical activation of carbonyl azides for enantioselective radical aziridination. <b>2021</b> , 7, 1120-1134	11
83	Biomimetic metal-oxidant adducts as active oxidants in oxidation reactions. <b>2021</b> , 435, 213807	14
82	Ru <sup>II</sup> -Acylimido Intermediate in [Ru(Por)Cl] <sub>2</sub> -Catalyzed C-N Bond Formation: Spectroscopic Characterization, Reactivity, and Catalytic Reactions. <b>2021</b> , 60, 18619-18629	2
81	Ru <sup>V</sup> -Acylimido Intermediate in [Ru <sup>V</sup> (Por)Cl <sub>2</sub> ]-Catalyzed C <sup>≡</sup> N Bond Formation: Spectroscopic Characterization, Reactivity, and Catalytic Reactions. <b>2021</b> , 133, 18767-18777	0

80	A tetra-cationic tetrapyrrolineporphyrinato Iron(II) grafted onto sulfonated SBA-15 as a novel heterogeneous catalyst for the aerobic oxidation of C(sp <sup>3</sup> )-H bonds in alkanes. <b>2021</b> , 552, 149379	4
79	C-H Amination via Electrophotocatalytic Ritter-type Reaction. <b>2021</b> , 143, 8597-8602	19
78	Controlling Enantioselectivity and Diastereoselectivity in Radical Cascade Cyclization for Construction of Bicyclic Structures. <b>2021</b> , 143, 11130-11140	4
77	Chirogenesis in Zinc Porphyrins: Theoretical Evaluation of Electronic Transitions, Controlling Structural Factors and Axial Ligation. <b>2021</b> , 22, 1817-1833	2
76	Synthesis, electronic and photophysical properties of a bisacridinium-Zn(II) porphyrin conjugate. <b>2021</b> , 24, 1-9	
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74	Iron-Catalyzed Alkyne Carboamination via an Isolable Iron Imide Complex. <b>2021</b> , 40, 2945-2950	2
73	Efficient Aliphatic C-H Oxidation and C-C Epoxidation Catalyzed by Porous Organic Polymer-Supported Single-Site Manganese Catalysts. <b>2021</b> , 11, 10964-10973	3
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71	Iron-catalyzed arene C-H hydroxylation. <b>2021</b> , 374, 77-81	11
70	Non-symmetric porphyrins encapsulated in liposomes: Tumor cell destruction via non-photodynamic activity. <b>2021</b> , 195, 109746	
69	Synthesis and characterization of axially modified Zn(II) porphyrin complexes for methylene blue dye oxidative degradation. <b>2021</b> , 1243, 130791	3
68	Catalytic enantioselective synthesis of β-amino alcohols by nitrene insertion. <b>2021</b> , 64, 452-458	7
67	Site-Selective C-H Functionalization by Decatungstate Anion Photocatalysis: Synergistic Control by Polar and Steric Effects Expands the Reaction Scope. <b>2018</b> , 8, 701-713	179
66	CHAPTER 1: Dioxygen Binding and Activation Mediated by Transition Metal Porphyrinoid Complexes. <b>2018</b> , 1-36	2
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64	Acetylacetone as an oxygen activator to improve efficiency for aerobic oxidation of toluene and its derivatives by using cobalt meso-tetraphenylporphyrin. <b>2020</b> , 44, 10286-10291	4
63	Zirconium-based Metal-Organic Frameworks with N-Confused Porphyrins: Synthesis, Structures, and Optical Properties. <b>2017</b> , 46, 1230-1232	3

62	DFT study on Ir-quinoid catalyzed C-H functionalization: new radical reactivity or direct carbene transfer?. <b>2021</b> , 57, 11370-11373	
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59	Enthalpy-Entropy Compensation Effect in Oxidation Reactions by Manganese(IV)-Oxo Porphyrins and Nonheme Iron(IV)-Oxo Models. <b>2021</b> , 143, 18559-18570	4
58	A theoretical perspective on the reactivity of high-valent Mn-Oxo/nitrene species towards oxidative transformations. <b>2022</b> , 529, 120654	
57	Unravelling reaction selectivities via bio-inspired porphyrinoid tetradentate frameworks. <b>2022</b> , 450, 214239	0
56	Nitrene Photochemistry of Manganese N-Haloamides*. <b>2021</b> , 60, 26647-26655	1
55	Nitrene Photochemistry of Manganese N-Haloamides**. <b>2021</b> , 133, 26851	0
54	Catalytic Aerobic Oxidation of Alkenes with Ferric Boroperoxo Porphyrin Complex; Reduction of Oxygen by Iron Porphyrin. <b>2021</b> , 94, 2493-2497	2
53	Iron-Catalyzed Oxidative Amination of Benzylic C(sp <sup>3</sup> )-H Bonds with Anilines. <b>2021</b> ,	0
52	Synthesis of a Series of Tropone-Fused Porphyrinoids.. <b>2022</b> ,	2
51	Mechanistically Guided Workflow for Relating Complex Reactive Site Topologies to Catalyst Performance in C-H Functionalization Reactions.. <b>2022</b> ,	1
50	Mimicking Enzymes: Taking Advantage of the Substrate-Recognition Properties of Metalloporphyrins in Supramolecular Catalysis.	1
49	Computational insights into different regioselectivities in the Ir-porphyrin-catalyzed C <sub>sp<sup>3</sup></sub> H insertion reaction of quinoid carbene.	2
48	First synthesis of chlorin skeleton containing thiazole and thiophene rings and its optical properties.	
47	Oxyfunctionalization of Benzylic C <sub>sp<sup>3</sup></sub> H Bonds of Toluene Mediated by Covalently Anchored Co-Schiff Bases.	
46	C(sp <sup>3</sup> )H Amination Catalyzed by Ir(Me)-Porphyrin: A Computational Study. <b>2022</b> , 41, 569-580	0
45	Methane Monooxygenase Mimic Asymmetric Oxidation: Self-Assembling $\beta$ -Hydroxo, Carboxylate-Bridged Diiron(III)-Catalyzed Enantioselective Dehydrogenation.. <b>2022</b> ,	3

44	Selective Oxidation of L-Methionine, L-Ethionine, N-Acetyl-L-Methionine, L-Buthionine Catalyzed by [FeIII-Salen]Cl Complexes: A Spectral, Kinetic, and Electrochemical Study. <b>2021</b> , 95, S230-S241		
43	Stepwise N-Methylation of Ruthenium and Cobalt 5,15-Diazaporphyrins: Post-Functionalization of Porphyrinoid Catalysts.. <b>2022</b> ,		1
42	C-N Bond Forming Radical Rebound Is the Enantioselectivity-Determining Step in P411-Catalyzed Enantioselective C(sp)-H Amination: A Combined Computational and Experimental Investigation.. <b>2022</b> ,		1
41	Manganese-catalyzed hydrogenation, dehydrogenation, and hydroelementation reactions.. <i>Chemical Society Reviews</i> , <b>2022</b> ,	58.5	8
40	Unexpected Imidazole Coordination to the Dirhodium Center in a Protein Environment: Insights from X-ray Crystallography and Quantum Chemistry.		1
39	Efficient Reductive Defluorination of Branched PFOS by MetalPorphyrin Complexes.		1
38	Coordination Chemistry. <b>2022</b> , 141-240		1
37	Non-heme iron coordination complexes for alkane oxidation using hydrogen peroxide (H2O2) as powerful oxidant. 1-35		1
36	Modular Difunctionalization of Unactivated Alkenes through Bio-Inspired Radical Ligand Transfer Catalysis.		1
35	Thermal Studies of Aqueous Free-base Porphyrin and Metalloporphyrins of Trivalent and Tetravalent Metal Ions. <b>2022</b> , 34, 2049-2054		
34	An Update on Oxidative C-H Carbonylation with CO. <b>2022</b> , 12, 7470-7485		3
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